

## 1- What is the benefit of using master-slave architecture rather than building on master only?

- work with master and slave faster than work on master only.
- master-slave don't need to install denseness for many time it will install one time.
- master-slave can work on big number of projects .

## 2- What is different between authorization and authentication ?

Authentication: is the process of verifying the identity of a user or system.

Authorization :is the process of determining whether an authenticated user or system has the necessary permissions to access a specific resource or perform a certain operation.

### 3-Make jenkins-shared-library and make your jenkinsfile which you used in lab2 to point to this library

Dashboard > Manage Jenkins > System >

Sharable libraries available to any Pipeline jobs running on this system. These libraries will be trusted, meaning they run without "sandbox" restrictions and may use @Grab.

Library Name

Default version

Currently maps to revision: 9265d551921c157f72dff608ba843dbbb4861516

☐ Load implicitly

☒ Allow default version to be overridden

☒ Include @Library changes in job recent changes

☐ Cache fetched versions on controller for quick retrieval

Retrieval method

Loads a library from an SCM plugin using newer interfaces optimized for this purpose. The recommended option when available.

Source Code Management

Dashboard > Manage Jenkins > System >

Retrieval method

Loads a library from an SCM plugin using newer interfaces optimized for this purpose. The recommended option when available.

Source Code Management

Project Repository

Credentials

Behaviors

Dashboard > pipe-sprints >

Status

Changes

Build with Parameters

Configure

Delete Pipeline

Full Stage View

Rename

Pipeline Syntax

Build History

trend

Filter builds...

#32

Jun 26, 2023, 4:12 AM

#31

Jun 26, 2023, 4:08 AM

#30

Jun 26, 2023, 4:05 AM

Pipeline pipe-sprints

Add description

Disable Project

Stage View

Average stage times:  
(Average full run time: ~4s)

	Declarative: Checkout SCM	build	builddocker	test	deploy	Declarative: Post Actions
#32	369ms	112ms	805ms	102ms	96ms	91ms
#31	317ms	105ms	1s	178ms	164ms	80ms
#30	363ms	109ms	462ms	64ms	59ms	97ms
#29	427ms	124ms	100ms	64ms	65ms	97ms

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh/?region=us-east-1&connType=standard&instanceId=i-0b47a13ae526...

Setting up libnetfilter-conntrack3:amd64 (1.0.8-3) ...  
Setting up binutils-x86-64-linux-gnu (2.35.2-2) ...  
Setting up libnftables1:amd64 (0.9.8-3.1+deb11u1) ...  
Setting up nftables (0.9.8-3.1+deb11u1) ...  
Setting up iptables (1.8.7-1) ...  
update-alternatives: using /usr/sbin/iptables-legacy to provide /usr/sbin/iptables (iptables) in auto mode  
update-alternatives: using /usr/sbin/ip6tables-legacy to provide /usr/sbin/ip6tables (ip6tables) in auto mode  
update-alternatives: using /usr/sbin/iptables-nft to provide /usr/sbin/iptables (iptables) in auto mode  
update-alternatives: using /usr/sbin/ip6tables-nft to provide /usr/sbin/ip6tables (ip6tables) in auto mode  
update-alternatives: using /usr/sbin/arptables-nft to provide /usr/sbin/arptables (arptables) in auto mode  
update-alternatives: using /usr/sbin/ebtables-nft to provide /usr/sbin/ebtables (ebtables) in auto mode  
Setting up docker.io (20.10.5+dfsg1-1+deb11u2) ...  
Adding group 'docker' (GID 107) ...  
Done.  
invoke-rc.d: could not determine current runlevel  
invoke-rc.d: policy-rc.d denied execution of start.  
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /lib/systemd/system/docker.service.  
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /lib/systemd/system/docker.socket.  
Setting up binutils (2.35.2-2) ...  
Setting up needrestart (3.5-4+deb11u3) ...  
Processing triggers for libc-bin (2.31-13+deb11u6) ...  
root@a98ae77cf4:~# docker images

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
helmy1992/task	1.2	28e44bd6b7f8	6 days ago	120MB
myapp	1.0	28e44bd6b7f8	6 days ago	120MB
jenkins/jenkins	latest	60786637d5b0	12 days ago	460MB
ubuntu	latest	99284ca6cea0	2 weeks ago	77.6MB
jenkins/jenkins	its	c14d340748cf	3 weeks ago	471MB

i-0b47a13ae526a4311 (helmy)

PublicIPs: 3.237.255.217 PrivateIPs: 10.0.0.5

CloudShell Feedback Language

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EGX30 -2.40%

7:14 AM 6/26/2023

github.com/helmy1992/jenkins/blob/master/jenkinsfile

Code

master

Go to file

Dockerfile

Jenkinsfile

Code

Blame 51 lines (46 loc) · 1.04 KB

```
1 #!library('shared-lib') ..
2 pipeline {
3   agent any
4   parameters {
5     booleanParam(name:'test', defaultValue: true, description:'this parameter help you to know project name')
6     choice(name:'namespace', choices:['dev','prod','stage'], description: '')
7   }
8   stages {
9     stage('build') {
10      steps {
11        buildingImage()
12      }
13    }
14    stage('builddocker') {
15      steps {
16        buildingDocker()
17      }
18    }
19    stage('test') {
20      when {
21        expression {
22          params.test == true
23        }
24      }
25      steps {
26        testing()
27      }
28    }
29    stage('deploy') {
30      steps {
31        deployingImage()
32      }
33    }
34  }
35  post {
36    always {
37      echo 'Job was triggered'
38    }
39  }
40 }
```

Documentation · Share feedback

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22°C مشمس 7:21 AM 6/26/2023

github.com/helmy1992/task-lib/tree/master/vars

helmy1992 / task-lib

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

Code

master

Go to file

vars

buildingImage.groovy

buildingDocker.groovy

deployingImage.groovy

testing.groovy

readme

task-lib / vars

helmy1992 Update buildingdocker.groovy 9265d55 · 13 minutes ago History

Name	Last commit message	Last commit date
..		
buildingImage.groovy	Rename build.groovy to buildingImage.groovy	41 minutes ago
buildingDocker.groovy	Update buildingdocker.groovy	13 minutes ago
deployingImage.groovy	Rename deploy.groovy to deployingImage.groovy	40 minutes ago
testing.groovy	Rename test.groovy to testing.groovy	39 minutes ago

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## 4- Try to make new slave as container or ec2 server and configure master to use it

The image displays two screenshots from a Windows desktop environment, showing the Jenkins web interface. The top screenshot shows the 'Log' page for a slave node named 'slave-2'. The log contains the following text:

```
[06/25/23 05:10:29] [SSH] Checking java version of /jenkins_home/jdk/bin/java
Couldn't figure out the Java version of /jenkins_home/jdk/bin/java
bash: line 1: /jenkins_home/jdk/bin/java: No such file or directory

[06/25/23 05:10:29] [SSH] Checking java version of java
[06/25/23 05:10:29] [SSH] java -version returned 11.0.19.
[06/25/23 05:10:29] [SSH] Starting sftp client.
[06/25/23 05:10:29] [SSH] Copying latest remoting.jar...
Source agent hash is 258899E9C1FD1001F55EF1A80B224323. Installed agent hash is 258899E9C1FD1001F55EF1A80B224323
Verified agent jar. No update is necessary.
Expanded the channel window size to 4MB
[06/25/23 05:10:29] [SSH] Starting agent process: cd "/jenkins_home" && java -jar remoting.jar -workDir /jenkins_home -jar-cache
/jenkins_home/remoting/jarCache
Jun 25, 2023 5:10:30 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /jenkins_home/remoting as a remoting work directory
Jun 25, 2023 5:10:30 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /jenkins_home/remoting
<====[JENKINS REMOTING CAPACITY]====>channel started
Remoting version: 3107.v665000b_51092
Launcher: SSHLauncher
Communication Protocol: Standard in/out
This is a Unix agent
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by jenkins.slaves.StandardOutputSwapper$ChannelSwapper to constructor java.io.FileDescriptor(int)
WARNING: Please consider reporting this to the maintainers of jenkins.slaves.StandardOutputSwapper$ChannelSwapper
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
Evacuated stdout
Agent successfully connected and online
```

The bottom screenshot shows the 'Configure' page for the same slave node. The configuration fields are as follows:

- Number of executors:** 1
- Remote root directory:** /jenkins\_home
- Labels:** slave-2
- Usage:** Use this node as much as possible
- Launch method:** Launch agents via SSH
- Host:** 35.170.242.166
- Credentials:** (empty)

Both screenshots include a Windows taskbar at the bottom with the system clock showing 8:10 AM on 6/25/2023. An 'Activate Windows' watermark is visible in the bottom right corner of both screenshots.

Dashboard > Nodes > slave-2 > Configure

Host ?  
35.170.242.166

Credentials ?  
ubuntu (slave-ssh)  
Add

Host Key Verification Strategy ?  
Non verifying Verification Strategy

Advanced Edited

Availability ?  
Keep this agent online as much as possible

Node Properties  
☐ Disable deferred wipeout on this node ?

Save

Activate Windows  
Go to Settings to activate Windows.

Dashboard > pipe-sprints > #6

status  
Changes  
Console Output  
View as plain text  
Edit Build Information  
Delete build '#6'  
Parameters  
Git Build Data  
Restart from Stage  
Replay  
Pipeline Steps  
Workspaces  
Previous Build

### Console Output

```
Started by user mustafa
Obtained Jenkinsfile from git https://github.com/helmy1992/jenkins.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on slave-2 in /jenkins_home/workspace/pipe-sprints
[Pipeline] {
[Pipeline] stage
[Pipeline] (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential docker-hub
Fetching changes from the remote Git repository
> git rev-parse --resolve-git-dir /jenkins_home/workspace/pipe-sprints/.git # timeout=10
> git config remote.origin.url https://github.com/helmy1992/jenkins.git # timeout=10
Fetching upstream changes from https://github.com/helmy1992/jenkins.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress -- https://github.com/helmy1992/jenkins.git +refs/heads/*:refs/remotes/origin/* # timeout=10
Checking out Revision e39c1903e09c76ff40dac9d18229665a0e37819e (refs/remotes/origin/master)
Commit message: "Update Jenkinsfile"
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
> git config core.sparsecheckout # timeout=10
> git checkout -f e39c1903e09c76ff40dac9d18229665a0e37819e # timeout=10
> git rev-list --no-walk e39c1903e09c76ff40dac9d18229665a0e37819e # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
```

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Jenkins

Videos

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shared

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helmy1

Not secure | 44.199.249.65:8080/manage/computer/

VPN

 **Jenkins**

Search (CTRL+K)

   mustafa  log out

Dashboard > Manage Jenkins > Nodes >

Clouds

Node Monitoring

Build Queue









No builds in the queue.

Build Executor Status

built-in node + 2 agents (-1 of 1 executors busy)

Nodes

New Node


S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	2.72 GB	 0 B	2.72 GB	0ms 
	slave-1		N/A	N/A	N/A	N/A	N/A 
	slave-2	Linux (amd64)	In sync	4.62 GB	 0 B	4.62 GB	132ms 
Data obtained		2 min 45 sec	2 min 45 sec	2 min 45 sec	2 min 45 sec	2 min 45 sec	2 min 45 sec

Activate Windows

Go to Settings to activate Windows.

REST API Jenkins 2.401.1

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8:13 AM 6/25/2023